

nanophase technologies corporation
INNOVATE. PERFORM. SUCCEED.

*"When's a Nano Not a Nano, or...
What's in a Name?"*

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CEO, Nanophase Technologies

September 6, 2012



Cautionary Statement

Certain statements included in this presentation may constitute forward-looking statements within the meaning of applicable securities laws. These statements reflect what Nanophase Technologies anticipates, expects or believes may happen in the future. Nanophase Technologies' actual results could differ materially from the outcome or circumstances expressed or implied by such forward-looking statements as a result of a variety of factors expressed from time-to-time in the Company's periodic filings with the Securities and Exchange Commission (the "SEC").

The forward-looking statements contained herein are made only as of the date of this presentation, and Nanophase Technologies undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.



Corporate Information

Nanophase Technologies Corp.

Corporate Headquarters:

1319 Marquette Drive

Romeoville, IL 60446

630.771.6700

Second manufacturing facility in Burr Ridge, IL

www.nanophase.com

Ownership: Public since 1997

OTCQB: NANX

Fiscal Year: December 31

Common Stock: 28.5 million shares outstanding

History – Leading Nanotechnology Growth

- R&D to Technology to Manufacturing Phase (1989 – 2002)
 - Spun out of Argonne National Laboratory
 - Launched two manufacturing processes
 - > *Broad materials palette*
 - Launched dispersion and surface treatment capabilities
- Commercialization (2003 Fwd)
 - *BASF: ZnO in Personal Care market*
 - *Dow: Ceria in CMP*
 - Significant Nano adoption
- Platform to Market Driven (2008 Fwd)
 - *Ongoing applications development!*
 - Not without challenges!***
 - (case study)*



Marketing Strategy – Change in Model

- Changes from 2008 to 2012
- Partners
 - BASF
 - Shift from “Exclusives” to “Non-Exclusives”
 - Dow Chemical
 - BYK Chemie
 - CIK/Itochu
- Customer Direct
 - Targeted application solutions
 - Dramatic increase in revenue opportunities
 - Best pipeline ever!

New customers in field of use

More revenue from previously exclusive customers



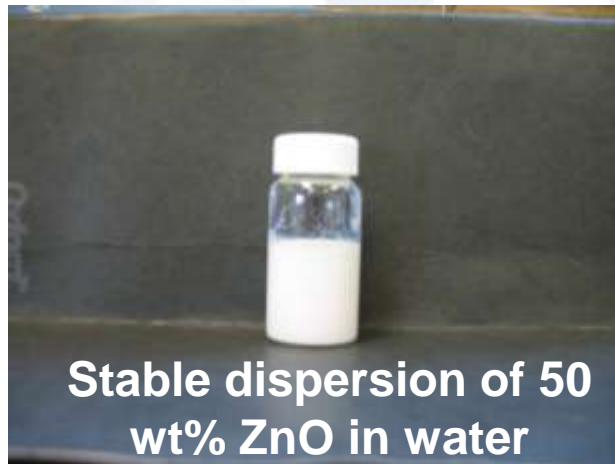
Benefits of Nanophase's Innovative Solutions

- Transparency – literally and figuratively
 - UVA and UVB blocking
 - Abrasion resistance
 - High optical clarity and gloss
- Long-lasting protection
- All natural
- Superior polished finishes
- No change in current manufacturing process
 - We sell the way manufacturers want to buy
 - ***Applications expertise***

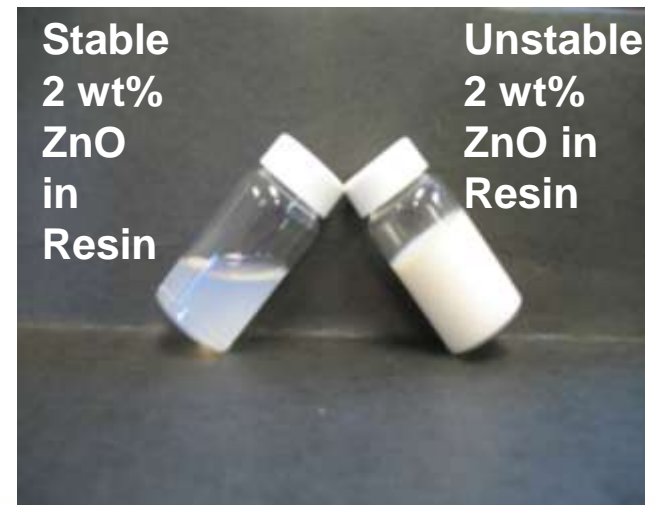
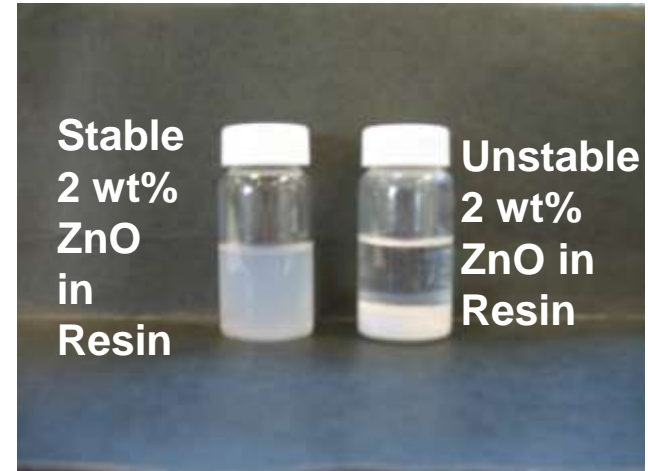


Customers receive ready-to-use nanoproducts, stabilized at their primary particle size, with no secondary structure or agglomeration.

Compatible Nano Particles Significantly Improve Performance



Add to resin



Compatible Dispersions Enable Products That Perform!

Optimized for Performance: Transparency in Thin Films

***Incompatible 1 wt% ZnO in
1 Mil Clear Coating***



Agglomerated Particles

***Compatible 1 wt% ZnO in
1 Mil Clear Coating***



Discretely Dispersed Particles

Compatible Dispersions Enable High Transparency

Products Incorporating Nanophase Technologies

Nanophase is a leader in providing nanomaterials technologies that enhance product performance in a manner that is impossible or impractical with conventional/organic materials.



ELECTRONIC MATERIALS
CMP TECHNOLOGIES



Case Study – Sunscreens – “Supplier” Approach

- Supplier to BASF since 1999
- Z-Cote (65 nm ZnO)
- HP-1 (Coated Z-Cote)
 - 98% of U.S. Market
 - Hundreds of tons per year
- Mainly for:
 - Higher-End Products
 - Well-Informed Consumers



Case Study – Sunscreens – *Partnering Approach*

Two Big Changes & a Challenge:

- “All-Natural” ↑
- UVA Awareness ↑
 - EU-Driven
 - FDA Monograph Q412
- *Uh-Oh,... “Non-Nano!”* ↓
 - “We can’t do that!”
 - “What’s out there?”
 - Meet LSA! (150 nm ZnO)
- Did we get lucky???
 - No, we used nanotechnology and persistence to get there!



Let's Give 'Em What They Want!

(20-40-60-150-250-800nm)



What is the right size for you?

NanoArc® Sub-Micron Aluminum Oxide Dispersions Meet the Challenge For Scratch Resistant Water-Based Coatings in Wood and Graphic Arts Applications

Nanophase Technologies realizes that you have many options when choosing an additive for scratch resistance. That is why we provide custom solutions to meet your scratch resistant requirements. Our comprehensive product offering features a variety of sub-micron sized aluminum oxide particles in high-solids water dispersions. We will assist you in choosing the dispersion that is 'Just Right' for your desired properties for performance, clarity, and coating thickness.



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Main Commercialized Products and Markets

NanoArc® ZnO: Personal care products (cGMP)



NanoArc® Al2O3: Scratch resistant coatings

NanoArc® CeO2 & NanoArc® Al2O3: Precision polishing (electronics)



On-Going Market Development

- Maintain dominant position in personal care market through BASF
 - More products to come
- Robust application development in three Product Groups:
 - Personal Care
 - Coatings (*Scratch Resistance and others*)
 - Polishing
- New market development
- Leverage our market knowledge and applications development know-how to make small particles perform!

or....."When's a Nano not a Nano?"

Keep Calm and Carry On!

- Succeeding at Nanotechnology is not “Rocket Science!”
- Apply Basic Business Principles
- “Non-Nano” is a Typical Marketing Challenge
- Add Value in Ways Your Customers Appreciate

*****Bring Unique Innovation*****

- Simplify Their Lives
- “Look Like” Other Suppliers
- Patience and Persistence
(TTM: “It is what it is!”)

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Thank You

